REMARKS

Claims 1-33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (6,468,708) in view of Austin et al. (6,514,909). Applicants respectfully traverse this rejection.

This invention provides an aqueous dispersion composition comprising particles of a polyvalent metal salt of salicylic acid/styrene copolymer developer wherein said particles are at least 15% by weight of the aqueous composition and have an average particle size of greater than or equal to 0.75 μm and less than or equal to 2.0 μm, and wherein less than 2 % of the particles are greater than 10 μm, wherein said composition has a pH of greater than 6 and comprises a surfactant and a polymeric dispersant. This invention further provides a process of making an aqueous dispersion of particles of a polyvalent metal salt of salicylic acid/styrene copolymer developer, said particles having an average particle size of greater than or equal to 0.75 μm and less than or equal to 2.0 μm, and wherein less than 2 % of the particles are greater than 10 μm, said process comprising:

(a) preparing an organic phase comprising one or more auxiliary solvents, a polyvalent metal salt of salicylic acid/styrene developer, and a surfactant;

(b) preparing a separate aqueous phase containing a water soluble polyermeric dispersant;

(c) dispersing the organic phase into the aqueous phase to form a dispersed composition; and

(d) removing the auxiliary solvent from the dispersed composition; wherein the pH maintained during the process is greater than 6.

The developer composition utilized in the invention provides an imaging element with improved image quality and excellent color developability when subjected to high temperature and humidity treatment. The process used to make the developer composition allows for a well-controlled particle size and particle size distribution, and provides good dispersion stability. This results in a suspension having high active solids and a minimal amount of dispersing addenda. Further, after manufacturing, the composition is ready for coating without further processing.

As discussed in detail in Applicants' response dated December 28, 2004, Wang does not describe or suggest a salicylic acid/styrene copolymer developer or a method of making the same. Nor does Wang suggest a developer composition or method of making said composition having the advantages of the composition of the current invention.

Austin also does not describe or suggest salicylic acid/styrene developers or any method of making such developers. Rather it suggests, out of a long list of developers, the use of an acid polymer (which could be any acid) with a copolymer of maleic anhydride with styrene. It only suggests the use of an aromatic carboxylic acid as an aromatic carboxylic acid-acetylene copolymer. Austin does discuss the use of salicylic acid with phenolic resins, but these are entirely different resins. The copolymers used in developers are not interchangeable. The developer must meet many specifications in order to perform well in the final imaging element. For example, the maleic acid based resins bind the polyvalent metal salt more strongly than the styrene-salicylic acid resins. This results in less efficient dye formation. Therefore, the styrene maleic acid resins are far less preferred. Phenolic resins can cause a yellowing problem under 50 klux HID test conditions. The 50 klux HID is a simulated light source used to measure daylight exposure induced light fade of prints. Yellowing is a common problem is some systems under light fade conditions.

Furthermore, not only does neither Wang nor Austin discuss the use of salicylic acid/styrene developers, they certainly do not discuss the specific salicylic acid/styrene developers of the invention, or the specific and novel method of making such developers. The current invention provides a developer wherein the particles are at least 15% by weight of the composition. The particle concentration is desired to be above 15% for ease of manufacturing and coating of the imaging element. The salicylic acid/styrene developers of the invention have a manufacturing advantage in that they are very soluble in the volatile organic solvents needed to make the particles. Therefore, they can be dissolved in a minimal amount of solvent, allowing the process to be conducted at high active resin solids. Resins less soluble in organic solvent would require greater solvent loads, which would inhibit the high solids in the final slurry. The salicylic acid/styrene developers of the invention allow the developer dispersion to be

directly coated without further processing such as diafiltration or centrifugation in order to concentrate to high solids.

The average particle size and distribution must meet specific parameters in order to meet development requirements such as good optical density, particularly at high humidity and temperatures. This is demonstrated in the examples of the current application. The pH must be maintained above 6 in order to minimize the dissolution of the polyvalent metal (particularly zinc) into the water phase of the suspension. Free zinc is a problem in this system as it can lead to adverse keeping effects in the media. As required in claim 6, it is also highly preferred that the there be nearly complete removal of the organic solvent in order to achieve good stability of the particles of the developer.

Clearly the current invention is not obvious in light of Wang in view of Austin.

In light of the above remarks, Applicant respectfully request that the claims be allowed.

Respectfully submitted,

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